

Rim Lakes Mitigation Measures

Air Quality Protection

Smoke from prescribed burning would comply with Arizona Department of Environmental Quality (ADEQ) requirements. ADEQ considers the cumulative effects of smoke emissions from multiple jurisdictions prior to approving daily prescribed burning activities. This mitigates the potential for severe smoke effects from multiple prescribed fire projects to the entire action area.

Aquatic Protection

The forest plan emphasizes maintaining satisfactory riparian areas in MA 3. This management gives priority emphasis to the following streams: Chevelon Creek, Willow Springs Creek, Woods Canyon Creek, and Willow Creek. Specific standards and guidelines for riparian areas in MA 3 include:

1. Prevent siltation not to exceed 20 percent (85 mm) in riffle areas.
2. Manage for and maintain at least 80 percent of near natural shade over water surfaces.
3. Maintain 80 percent of the spawning gravel surface free of inorganic sediment.
4. Manage for stream temperatures not to exceed 68 degrees Fahrenheit, unless not technically feasible.
5. Manage for and maintain at least 60 percent of the woody plant composition in three or more riparian species.
6. Manage for and maintain at least three age classes of riparian plants, with at least 10 percent of the woody plant cover in sprouts, seedlings, and saplings.
7. Manage for and maintain at least 60 percent near natural shade and tree crown cover.
8. Manage and maintain or improve all riparian areas to satisfactory riparian condition.
9. Manage for or maintain at least 60 percent of potential habitat capability (HCI) for Apache trout, rainbow trout, brook trout, brown trout, loach minnow, and Little Colorado spinedace.
10. Manage for and maintain at least 80 biotic condition index in all perennial streams.
11. In addition, forest plan direction for MA 3 for both priority and nonriparian area includes:
 - Manage and maintain or improve all riparian areas to satisfactory riparian condition.
 - Manage for or maintain at least 60 percent of HCI for Apache trout, rainbow trout, brook trout, brown trout, loach minnow, and Little Colorado spinedace.

Cultural Resource Protection

1. Cultural resources in the Rim Lakes Project area are vulnerable to impacts from mechanical treatment, road construction and improvements, prescribed fire, and human disturbance associated with these undertakings.
2. All Rim Lakes proposed treatments should be managed as having either “no effect” or “no adverse effect” to cultural resources. This means that all sites listed, eligible, or unevaluated for the National Register Historic Places (NRHP) would be avoided or not

prior to the authorization of on-the-ground work for each phase of the project, the following must be completed:

- Inventory (survey), identification (site recording) and NRHP evaluation are documented in a Section 106 compliance inventory report and a signed Forest Service inventory standards and accounting (ISA) form are completed.
- Site protection requirements shall be documented in the inventory report and on the FS ISA form and the protection requirements shall be completed.

3. Timber and fire project managers will work with the zone archaeologist to assure there is adequate notification and time to conduct inventory surveys prior to implementation. Since the entire area may not be 100 percent surveyed and the entire area is proposed for prescribed burning, all phases will result in a “no adverse effect” (unless no cultural resources are present). All reports shall be sent to the SHPO. Protection measures shall be selected from appendix J, section II. Section II includes a list of protection measures that the forests can draw from to ensure that adverse effects to cultural resources are avoided or minimized. These measures include but are not limited to the following:

- No treatments or ground disturbance within site boundaries -or-
- Allow treatments within site boundaries provided: cutting is accomplished using hand tools only; large diameter trees are felled away from all features; materials removed from the site are removed by hand; no dragging of logs, trees, or thinned material across or within site boundaries.
- No use of vehicles or other mechanized equipment within site boundaries.
- No staging of equipment within site boundaries.
- No slash piles within site boundaries.
- The forest archaeologists may approve additional measures to further protect sites.
- In the case of broadcast burning, only fire sensitive sites will require protection from prescribed fire. Generally sites sensitive to fire effects include, but are not limited to, rock art, prehistoric sites with flammable architectural elements and other flammable features or artifacts, dendroglyphs (aspen art), historic sites with standing or down wooden structures, or other flammable features or combustible artifact materials (such as wood, historic properties) will require protection.
- For mechanized treatments, all cultural resources (excluding the General Crook Trail and Heber Reno Sheep Driveway) listed, eligible, or unevaluated for the NRHP will be marked for avoidance. Treatments and associated project activities will comply with the guidelines for the General Crook Trail stated in the forest plan.
- Use of motorized vehicles on any portion of the route not specifically designated and designed for motorized vehicle travel is prohibited. Emphasize protection for the historic value of the trail route. Manage a 200-foot-wide corridor to preserve evidences of historic roadway and landscape character, including related historic trees, markers, gravesites, and water holes.
- Motorized use of the route is defined as traveling on the trail route by motorized vehicle/equipment. Roads for access and hauling will be used that cross over the

nonmotorized portion of the trail. This activity is in compliance with the forest plan and will not adversely affect the trail and its associated historic features. Segments of the trail that are specifically designed for motorized vehicle travel will be used.

- The proposed activities will not adversely affect the characteristics that make the Heber-Reno Sheep Driveway District eligible for the NRHP. No protection measures are necessary for the driveway. Should additional sites be discovered during project implementation, all work in that locale shall be halted and the forest or zone archaeologist will be notified immediately. Work shall not resume in that area until the zone or forest archaeologist has notified the district ranger that work may proceed.
- Terms and conditions of Section 106 compliance shall include appropriate postproject monitoring requirements as determined necessary by the forest archaeologist to assess the effectiveness of protection measures. All site monitoring shall be documented on a site update form and/or monitoring report as appropriate. Per protocol, the Apache-Sitgreaves NFs shall maintain an updated list of sites to be monitored that are part of the Rim Lakes Forest Health Project, which will include the date monitoring is completed and the monitoring results.
- During prescribed burning, protect fire-sensitive sites by excluding from the burn area, protect by hand line/black line/wetline/foam retardant/structural fire shelter or remove heavy fuels from site by hand.
- Remove heavy fuels from site by hand: (1) prevent in-situ heavy fuels that cannot be removed from ignition (e.g., flush cut and bury stumps); and (2) implement same protective measures for future maintenance burns.
- Protect selected other sites from burning (optional): allow burning over nonfire-sensitive sites provided no ignition points within site boundaries and no staging of equipment within site boundaries and no slash piles within site boundaries.
- No vehicles allowed within site boundaries.
- No firewood gathering within site boundaries, or allow firewood gathering provided no dragging of logs, trees, or cut material across or within site boundaries.
- Materials removed from the site are removed by hand.
- Allow firewood cutting in areas of large, continuous, low density artifact scatters that cover large portions of a landscape provided that: all features and artifact concentrations are recorded and avoided; use of vehicles is prohibited during wet ground conditions; periodic monitoring is used to assess impacts and if impacts are noted, firewood cutting will be prohibited in the area.

Protect Range Allotment Infrastructure

Protective measures will be put in place for range improvement structures.

Recreation Public Health/Safety

1. To maintain health and safety for all users on the roads within the analysis area, project haul traffic speeds will be no greater than 25 miles per hour (m.p.h.).

2. Restrict hauling within the Rim Lakes Recreation Area during times of highest recreation use. The highest recreation use and associated traffic is on weekends between Memorial Day and Labor Day. On the weekends of Memorial Day, July 4th, and Labor Day, recreation use and associated traffic is high, including nonholiday days around the holiday. For example, when July 4 falls on Tuesday, Wednesday, or Thursday, the recreation use and associated traffic is high the whole week.
3. No hauling between 1200 noon Fridays and 0600 Mondays for weekends between and including Memorial Day and Labor Day.
4. No hauling on the Federal observed holiday for Memorial Day, July 4th, or Labor Day.
5. All operations will require appropriate signing, gates, or other traffic accommodations to provide for the safety of the public in the project area. Signs placed along haul routes and adjacent forest development roads must meet the current MUTCD standards developed by the U.S. Department of Transportation. Implement road closures and/or area closure restrictions as deemed necessary by forest officials for health and safety concerns during any operation.
6. Restrict treatment activities in units adjacent to the Rim Lakes Recreation Area and the forest system roads listed: 9514L, 9512E, 149, 148, 181, 9500A, 300X, 195, 9354, 208 89, 260C2, 171, 84, 89A, 105, 300A, 9350, 300B, 105A through 105N, 260, 300 from 300B east to the state route.
7. No treatments before 8 a.m. every day between Memorial Day and Labor Day.
8. No treatments between 12 noon Fridays and 8 a.m. Mondays.
9. No treatments on Federal observed holidays.
10. No treatments the week of the Federal observed July 4th holiday if the Federal observed July 4 holiday falls on Tuesday, Wednesday, or Thursday.
11. Implement road closures, one-way traffic, and area closure restrictions as deemed necessary by forest officials for health and safety concerns during any operation.
12. Evaluate and adjust haul routes and restrictions within the Rim Lakes Recreation Area and to the north to reflect any increase or decrease in traffic volume of forest visitors in the foreseeable future.
13. Separate designated snowmobiles trails and project implementation traffic/haul routes.

Road Protection

1. To protect the existing road system, all hauling shall take place only during dry or frozen conditions.
2. There will be seasonal haul restrictions on FR 300 based on snow level and saturation of soil. Snow level on the ground should be between 12 and 36 inches. Roads should be dry or frozen and have a minimum of 4 inches of snowpack at all times. Typical closure could be, but is not limited to, December 20 through April 1 of any given year. If needed, an alternate route can be used to divert around the paved section of FR 300 in order to protect the integrity of the road surfacing. This alternate route would include the use of

FR 105, 9500, and the 235 corridor. This action will need to receive prior approval from the Forest Service before any activity could take place.

Scenic Resource Protection

Stump heights should be 6 inches or less within the immediate foreground (up to 300 feet from National Forest System roads and trails, scenic byways, other designated visually sensitive travelways. This also applies within developed recreation sites and adjacent to known or designated dispersed camping sites.

Vegetation Protection

1. Broadcast burning will be conducted under conditions to preserve desired forest structures and densities.
2. Priority for maintenance burns should be ponderosa pine forest types that have not experienced fire in the last 10 years. Areas that have experienced fire in the last 2 years should be of lowest priority. Some areas can receive fire in consecutive years but then should be rested from fire for at least 3 years.
3. Dry mixed conifer forest that have not experienced fire in the last 25 years should be a priority for maintenance burning. Areas that have experienced fire in the last 5 years should be lower priority. Areas in dry mixed conifer should not experience fire in consecutive years.
4. Areas adjacent to recent fires should be of lower priority than those farthest from recent fires.
5. Stands that are being managed for old growth will not be prescribed burned in years associated with drought.
6. Stands that are being managed for old growth will be burned frequently.
7. Stands that meet or are being managed for old growth will be thinned to a desired basal area prior to prescribed burning.

Watershed Protection

The following are site-specific BMPs required for the project. The following list covers watersheds, riparian areas, uplands, roads, and noxious weeds. Some of the BMPs listed for one purpose may benefit other purposes.

General

1. If unforeseen events occur in the future (e.g., large wildfires, prescribed burns producing higher than planned levels of severely burned conditions, etc.) that result in significant disturbances to a sixth code watershed involved in this project, and if those effects are above those anticipated from this project, an equivalent disturbed area (EDA) analysis would be performed to determine if the watershed has sustained levels of disturbance which are above threshold values (generally interpreted as an EDA level equivalent to 15 percent of a sixth code watershed). This analysis would be used, along with field

investigations, to determine if the planned schedule of treatment activities in that watershed needs to be revised to allow for recovery of watershed conditions before the next treatment action there is taken.

2. The timber sale administrator or contracting officer representative will require operators to maintain a copy of these BMPs onsite for each vehicle conducting operations within a task order unit.
3. No more than 50 percent of a sixth code watershed would be treated within any 2-year time period.
4. The Canyon Creek watershed has a current EDA rating of 11.3 percent. Any action/treatment(s) taken in this watershed will require “timing” and “spacing” which would result in no additional increase to the current calculated EDA. The Canyon Creek watershed may be prescribe burned and/or hand thinned with no consideration for timing or spacing. The mechanical thinning should begin no sooner than the second year of the project, estimated to be 2014 to 2015.
5. The Christopher Creek watershed EDA of 14.7 percent will go above the 15 percent threshold based on Tonto National Forest actions/treatments on that portion of Christopher Creek within the Tonto National Forest boundary. The Rim Lakes treatments are a small portion of projected worst-case scenario EDA. It is recommended that treatments are spaced in two or three increments over a 10-year span beginning in year 2 or 3 (2014-2015). This would allow for recovery of treatments being implemented at this time on the Tonto NF and other past vegetative and fire treatments.
6. The Chevelon Creek Headwaters/Woods/Willow Springs watershed EDA of 2.7 percent could potentially move above the threshold if actions/treatments are not allotted with appropriate timing, spacing, and/or mitigation of treatments. Vegetation, fuels, and watershed specialists met and modified proposed treatment of residual material on approximately 25 percent of the treated area. Disturbance factors were reduced where top and limb material was lopped and scattered instead of piled and burned, or whole trees were to be removed. This action improves resistance to overland flow and generally results in quicker ground cover response. By implementing actions in three stages over 10 years, recovery of portions of the watershed can mitigate actions. The timing of treatment implementation is expected to mitigate cumulative effects within this watershed.
7. Final unit closeout or seasonal closeouts shall include a combination of water-barring, ripping/seeding, and slash of skid trails, haul roads, landings, disturbed areas, and areas potentially impacting intermittent, ephemeral, and perennial drainages. Any disturbed route, road, or trail having slopes exceeding 3 percent shall be water-barred.

Riparian/Stream Measures (Including Wetlands, Springs, Seeps)

1. Use project area maps for designating stream courses for water quality protection. Locations of protected stream channels and filter strips (streamside management zones) will be delineated on the project area and contract maps. Riparian areas and meadows designated for protection will also be delineated on the project area and contract maps. A smaller map of buffers is located at the end of the “BMP” section of the watershed report (Nelson 2011).

2. Streamside management zones (SMZs) were created using the following criteria: width is based on the nature of resource values at risk (such as the presence of aquatic ESA species or its potential introduction), special concerns for water quality degradation, erosion hazard, existing vegetative ground cover conditions, streambank and riparian conditions, natural geologic features, and flow regime. SMZ widths were designated using the established matrix as a guide.
3. A map of the buffers (Strm_Buffers_nad83.mxd) can be found in the project record.
4. Stream channels and other wetlands to be protected will be shown on the project contract maps along with their associated streamside management zones (SMZs), if applicable. SMZs shall be designated along intermittent and perennial stream channels and selected ephemeral channels.
 - Stream channels shall be crossed at designated crossings only and shall be preapproved by the authorized Forest Service (FS) officer.
 - Unless approved otherwise by the authorized FS officer, SMZ BMPs may prohibit, limit, or constrain mechanized activities within all or part of the SMZ.
 - There shall be no skidding or road construction longitudinally within stream channels.
 - There shall be no decking and machine piling of slash within stream channels.
 - Leadout ditches or waterbars shall not be constructed in such a manner as to divert runoff into stream channels.
 - Unless designated by the authorized FS officer, debris generated from treatment activities will be removed from stream channels.
 - Trees designated for removal shall be felled outside the stream channel.
 - Trees, in or on the banks of stream courses that are providing bank and stream channel stability are not to be removed.
 - The authorized FS officer will identify exceptions where restoration or additional thinning is needed for resource concerns.
 - The authorized FS officer will use their authority for skid trail and log landing location to protect, as needed, stream courses that were not designated on the project contract map.
5. Mechanical slash piling shall not occur in meadows, SMZs along perennial and intermittent streams, and riparian areas.
6. Wetlands, springs, seeps and meadow protection during tree removal activities: These areas will be protected from treatment activities and include a 50-foot buffer that excludes mechanized equipment. Treatments may occur within these areas if specific restoration objectives are identified and approved by the FS officer. Ground based harvest operations may only be conducted within the buffer if at least 6 inches of snow cover over a minimum of 3 inches of frozen ground are present. Harvest operations will be suspended if these conditions are not met due to warm temperatures. This BMP will be applied to mapped and unmapped wetlands, springs, seeps, and meadows.

7. For SMZs along perennial and intermittent streams, directional falling of trees shall be away from the stream channel. Ground skidding, decking of logs, and machine piling are permitted only on existing roadbeds that are located within SMZs. Road construction and burning of concentrated slash are prohibited within the SMZ. Stream channels to be protected within SMZs will be identified on watershed and project area contract maps. Stand prescriptions shall include a sketch of the SMZ location and width. Ground based harvest operations may be conducted in SMZs if at least 6 inches of snow cover over a minimum of 3 inches of frozen ground are present. Harvest operations will be suspended if these conditions are not met due to warm temperatures.
8. Log landings (decking areas) shall not be allowed in meadows, riparian areas, stream channels, and SMZs along perennial and intermittent streams. The authorized FS officer may authorize landings, in these areas, if required. These treatment areas will be clearly designated on the project area contract map.
9. Prescribed burn to allow for low to moderate burn intensities for the retention of long-term soil productivity, to maintain the sediment filtering capacity of streamside management zones, and to reduce erosion,
10. Fire control lines shall not be constructed on slopes greater than 40 percent or within SMZs. Exceptions will be identified by the authorized FS officer and specific mitigations will be determined at that time.
11. Ignition shall be above slope breaks of active flood plain. Fire will be managed such that burning into streamside management zones is limited to 15 percent or less of the area of the SMZ when adjacent upland zones have not recovered hydrologically from project entries. Utilize jackpot burning where appropriate.
12. Livestock grazing will be coordinated with prescribed burning, especially relative to drainages and their flood plains. Livestock use may be deferred, if necessary in order to establish grasses in sufficient quantity to carry fire, prior to burning, or to protect new growth after burning.

Ephemeral Drainages

1. Ephemeral drainages are recognized in the following ways: (1) they form the lowest spot of the surrounding ground; (2) they form obvious channel continuity along its length and joins with more obvious channels downstream; and (3) they show evidence of having run water on previous occasions, i.e., litter and vegetation has moved, or there is a lack of litter in the channel.
2. The water quality objectives for harvest treatments within close proximity to ephemeral drainages is to provide for or to retain sufficient amounts of ground cover possible to mitigate sediment input to the stream system and to minimize the number of crossings to retain streambank and stream bottom stability. No specific stream buffers are recommended, however, there are harvest techniques that aid in the retention of ground cover and are considered best management practices. The following are recommended BMPs for harvesting activities around ephemeral drainages, whether designated on a map or not (ephemeral channels).
 - No skidding will be allowed up or down ephemeral channels or in low points or swales. (ephemeral channels).

- No road construction will be allowed in or immediately adjacent to ephemeral streams except at designated crossings (ephemeral channels).
- All skid trails crossing drainages will be designated and approved by the authorized FS officer prior to activity, and will be at right angles to streambanks.
- Minimize the number of skid trail and road crossings across these channels.
- No log decks will be located within or immediately adjacent to the ephemeral streams or depressions.
- Maintain an undisturbed filter strip of vegetation and litter between skid trails/log decks/roads and the channel wide enough to prevent sediment from entering the channel.
- Construct water control features (waterbars, leadout ditches, etc.) on these skid trails and roads.
- Minimize the amount of logging debris deposited in ephemeral channels and remove excess debris by hand or end lining with one end suspension except where coarse woody debris is needed for stream health as identified by fisheries or watershed specialists (ephemeral channels).
- Do not cut trees where the root system is important in maintaining the integrity of the bank.
- The preferred method for extracting biomass using feller-buncher or grapple skidder equipment near ephemeral drainages (within 75 feet) will be to approach the material to be extracted on the contour to the ephemeral drainage as much as possible, cut or grapple biomass, then back equipment out as much as possible. This action will reduce ground disturbance by limiting the turning of equipment in or near the stream channels, and will retain as much of the filtering effect of undisturbed ground cover as possible. Slash can be placed to drive equipment over to reduce rutting and soil disturbance.
- Outslope roads/skid trails to minimize concentration of water/sediment into streams closer than 50 feet to channel.
- During servicing or refueling of equipment, pollutants shall not be allowed to enter any waterway, riparian area, or stream course. Select service and refueling areas well away from wet areas and surface water, and by constructing berms around such sites to contain spills. Spill prevention, containment, and countermeasures plans are required if the fuel exceeds 660 gallons in a single container or if total storage at a site exceeds 1,320 gallons. The project contract administrator shall designate the location, size, and allowable uses of service and refueling areas. The authorized FS officer shall be aware of actions to be taken in case of a hazardous substance spill (pollution/refuse control).
- Place water control features so there is adequate filter distance between structure outlets and stream channels (minimum of 50 feet and width can increase as slope steepness increases).

Water/Soil Protection

1. The contractor shall take all reasonable precautions to prevent pollution of all national forest soil and water. Equipment operators shall maximize the recovery and proper disposal of all fuels, fluids, lubricants, empty containers, and replacement parts. Refuse resulting from the contractor's use, servicing, repair, or abandonment of equipment shall be removed from National Forest System lands by the contractor to the appropriate disposal facilities. Any leaks originating from contractor equipment shall be repaired or the equipment replaced in a timely manner (pollution/refuse control).
2. Acceptance of Project Erosion Control Measures Before Project Closure: the authorized FS officer will verify that the contractor has implemented erosion control practices prior to closure of the project contract (general).
3. Machine Piling of Slash: Where slash is machine piled, minimize disturbance to existing ground cover, surface soil, and rock material, and any existing surface organic material (i.e. surface litter and duff and old semidecomposed branches and logs). Rough piling will also reduce impacts from equipment. Rough piling involves piling only large concentrations of slash, leaving areas of low concentration undisturbed. Machine pile when soils are dry or solidly frozen. Refer to the "Apache-Sitgreaves National Forests Guidelines for Excessive Rutting," 6/10/92, as a guide to determine when soils are too wet to operate. Keeping slash piles free from soil material will minimize smoldering of piles when burning, which should have a positive effect on air quality. Refer to number 5 above for retention of coarse woody debris (soil productivity).
4. Landings created by the treatment would be approximately one quarter to 1 acre in size with an average of one landing every 20 acres. Landings would have material piled onsite or moved into smaller piles out from the landings or moved back along skid trails. Material from the landings may be lopped and scattered in disturbed areas to reduce erosion (erosion control).
5. Log Landing Erosion Prevention and Control: Immediately after use, landings will be scarified as needed to eliminate compaction. Once scarified, log landings are to be reseeded, as needed, with an erosion control seed mix consisting of primarily native species. Slash or chips will be scattered on landings to further retard formation of rills and gullies (soil productivity).
6. Limit the Operating Season Ground-disturbing Activities (tractor skidding, decking, and machine piling, etc.): shall be limited to dry or solidly frozen soil conditions to reduce compaction and soil displacement (rutting) that is associated with tree removal activities when soils are wet or are saturated. Hauling and skidding will be restricted on all soils by the contract administrator during wet periods to prevent damage to the road system. (See the "Apache-Sitgreaves National Forests Guidelines for Excessive Rutting," 6/10/92). This is most important in areas associated with terrestrial ecosystem unit survey mapping units 197 and 207.
7. Tractor Skidding Design: Skid trail design will be agreed upon by the authorized FS officer and the contractor. To minimize soil disturbance by equipment use, trees are to be felled to the lead and the authorized FS officer shall locate skid trails as far apart as possible to reduce the number of skid trails needed to harvest the unit. Use existing skid trails where properly located. Designate new skid trails throughout the project area to prevent long, straight skid trails from running up and down slopes. Skidding of logs will

be with one end of the log suspended above the ground surface. Skidders will be required to stay on the skid trail system, except where other objectives take priority (like maximum site disturbance wanted for seed cuts, etc.), which shall be noted on the stand prescription field card (soil productivity).

8. Erosion Control on Skid Trails: Skid trails will be water-barred, scarified, and seeded with primarily native species as needed. All berms and depressions such as ruts will be filled in or removed, restoring skid trails to the natural grade of the slope to the greatest extent possible. In addition, slash generated from the project may be spread in addition to water barring where conditions require (erosion control).
9. Soil Productivity/Coarse Woody Debris: To maintain or improve soil productivity in areas more than a half mile from private land, manage toward a minimum of 7–14 tons per acre of coarse woody debris in pine types, and 8–16 tons per acre in the mixed conifer types, in the 3-inch plus size class. Where 7–14 tons per acre of coarse woody debris currently exists, break up the continuity to reduce potential fire spread. Reduced levels of organic debris may be allowed within fuelbreaks. Manage toward a minimum of 8–16 tons per acre on mixed conifer sites of large woody material (3-inch plus) (soil productivity).
10. Soil Productivity/Coarse Woody Debris: Within a half mile around private land; to maintain or improve soil productivity and maintain low fuel loads, manage toward a minimum of 3–6 tons per acre of coarse woody debris in pine types, in the 3-inch plus size class. Manage toward a minimum of 5–10 tons per acre on mixed conifer sites of large woody material (3-inch plus) (soil productivity).

Noxious Weeds

1. If noxious/invasive weed populations are identified prior to implementation, avoid WUI treatment in the area until noxious weeds are eliminated, or avoid the site occupied by the weeds. Monitor the site for a minimum of three growing seasons post weed treatment to determine success of eradication (noxious weeds).
2. If noxious/invasive weeds are identified within a treatment unit while treatment is occurring, equipment will be cleaned and inspected before moving to another treatment unit (noxious weeds).
3. Any fills, mulches, or revegetation seeding used during or after project implementation will be certified weed free (noxious weeds).
4. The Forest Service will be notified prior to each piece of equipment entering the national forest. Notification will include the location of the equipment's most recent operations (noxious weeds).
5. Ensure that all contract equipment moved onto the national forest is free of soil, weeds, vegetative matter, or other debris that could harbor seeds. Inspect each piece of equipment to ensure cleanliness, prior to entering the national forest (noxious weeds).
6. Highly disturbed areas with significant bare ground will be reseeded using native seed to reestablish perennial plants (noxious weeds).
7. Seeding will be considered if natural revegetation of ground cover species does not occur rapidly enough to protect an area from erosion (noxious weeds).

8. Survey for noxious weeds in treatment units at a time when the growing season is well established and prior to treatment implementation (noxious weeds).
9. If noxious/invasive weeds are identified during or post implementation, treat the weeds and monitor the site for a minimum of three growing seasons to determine weed treatment success (noxious weeds).
10. Minimize soil disturbance by limiting the extent of the area traveled by vehicles, and by avoiding areas with wet soils (noxious weeds).

Monitoring

1. Conduct Implementation and Effectiveness Monitoring for Best Management Practices: The desired result of BMP monitoring is to document that BMPs have been applied as prescribed and that they appear effective in reducing sediment and moderating flow regimes in forest streams. BMPs that are found to be ineffective in protecting identified resource, aquatic, and water quality goals will be adjusted. EDA related BMPs (monitoring).
2. Soil disturbance class monitoring (Page-Dumroese 2009) will be used to monitor site disturbance during and after treatment. Strive to limit soil disturbance class to 3–5 percent or less in the administration of the operation. Class 3 can be minimized by using the following BMPs (monitoring).

Wildlife Habitat Protection

1. All VSS 6 groups will be retained where they occur throughout the project area in alternative C as described in the forest plan (as amended).
2. Mexican spotted owl timing restrictions will be applied to management activities within one-quarter mile of PACs. Within these areas, no treatment related activities will occur from March 1 through August 31.
3. Implement forest plan and MSO recovery plan guidelines for treatments in Mexican spotted owl protected and restricted habitats.
4. Retain all trees greater than 24 inches in diameter in MSO restricted habitat areas.
5. Broadcast burning in MSO restricted and protected habitat will be to reduce woody debris while retaining other habitat components. Broadcast burning will be managed to preserve large (greater than 24 inches) trees of all species, maintain dense forest canopy where it exists, and retain snags and downed logs at or above forest plan amendment 6 guidelines.
6. No broadcast burning or thinning will occur within the 100-acre core areas of MSO PACs.
7. Burning proximate to PAC(s) during the breeding season (March 1–August 31) would be conducted in such a manner that only limited smoke would occur within a PAC and smoke would not settle in PACs for long durations having a negligible indirect effect to MSO.

8. During all treatments, retain substantive amounts of key MSO and goshawk habitat components (e.g. snags greater than or equal to 18 inches in diameter, logs greater than or equal to 12 inches in diameter, and hardwood tree species).
9. Fire-created openings should be minimal and not greater than 2 acres in restricted habitat.
10. In mixed conifer stands where low severity burning is allowed, broadcast burning will not occur until mechanical treatments are completed in those units. Low severity burning is allowed in mixed conifer stands not proposed for mechanical treatment.
11. Live trees with the potential to provide nesting habitat cavities will be favored for retention.
12. Northern goshawk timing restrictions will be applied to management activities within PFAs. No treatment related activities will occur from March 1 through September 30.
13. Advanced regeneration (20 percent of group openings) will be protected with reduced burn intensity.
14. Created openings in goshawk habitat will not exceed the size directed by forest plan direction (2 acres in PFAs, 4 acres outside PFAs), and will occur over no more than 20 percent of the entire project area to create VSS 1 and manage VSS 2.
15. Low severity broadcast burn in goshawk PFAs to reduce woody debris while retaining a more dense mosaic of VSS classes than areas outside the PFA. Manage for snag and log numbers at or above forest plan amendment 6 guidelines.
16. Existing snags will be protected outside of landing areas. Recruitment of future snags will occur as treatment stands are marked for mechanical treatment. Retain two to three large (greater than 18 inches in diameter) trees per acre as recruitment snags. Live trees with dead tops or lightning scars are top priority for retention as future snags. Retain three snags and recruitment snags per acre around meadows.
17. American peregrine falcon timing restrictions and habitat alteration guidelines will be applied around existing eyries. Treatment related disturbances a half mile around an active eyrie and line-of-sight disturbances up to 3 air miles from an active eyrie will be avoided from February 1 through August 15.
18. Maintain forested escape cover around at least half the perimeter of stock tanks, springs, and wetlands.
19. Protect existing elk enclosure fences during all treatment activities.
20. Preserve existing known turkey roosts.
21. Buffer known raptor nests from mechanical treatments according to forest plan or other established guidelines.
22. For bald eagle, enforce a forest closure period (March 1 through August 31) unless the first nesting attempt fails and another nesting attempt does not occur within 45 days after the failure.
23. Where known, bald eagle roost trees will be protected from project activities. If bald eagle winter roost sites are discovered in the EMA during project implementation, buffers will be established around the sites according to guidelines in the "Bald Eagle Conservation and Assessment Strategy."